

Claims

- [c1] An oilfield treatment composition comprising a mixture of a solid acid-precursor and a solid acid-reactive material.
- [c2] The composition of claim 1 wherein the mixture is a physical mixture of particles.
- [c3] The composition of claim 1 wherein the solid acid-precursor and the solid acid-reactive material are present in the same particle.
- [c4] The composition of claim 3 wherein the solid acid-precursor surrounds the solid acid-reactive material.
- [c5] The composition of claim 4 wherein the solid acid-reactive material is soluble in water.
- [c6] The composition of claim 5 wherein the solid acid-reactive material is boric acid or borax.
- [c7] The composition of claim 1 wherein the solid acid-precursor is selected from the group consisting of lactide, glycolide, polylactic acid, polyglycolic acid, copolymers of polylactic acid and polyglycolic acid, copolymers of glycolic acid with other hydroxy-, carboxylic acid-, or

hydroxycarboxylic acid-containing moieties, copolymers of lactic acid with other hydroxy-, carboxylic acid-, or hydroxycarboxylic acid-containing moieties, and mixtures thereof.

- [c8] The composition of claim 1 wherein the solid acid-reactive material is substantially insoluble in water.
- [c9] The composition of claim 8 wherein the solid acid-reactive material is selected from the group consisting of magnesium hydroxide, calcium carbonate, aluminum hydroxide, calcium oxalate, calcium phosphate, aluminum metaphosphate, sodium zinc potassium polyphosphate glass, and sodium calcium magnesium polyphosphate glass.
- [c10] The composition of claim 1 wherein the solid acid-precursor is coated with a hydrolysis-delaying material.
- [c11] The composition of claim 4 wherein the solid acid-precursor surrounding the solid acid-reactive material is coated with a hydrolysis-delaying material.
- [c12] An oilfield treatment method in which a filter cake is formed and at least partially destroyed on a subterranean formation surface comprising:
 - a) preparing an oilfield treatment fluid comprising:
 - i) a solid acid-precursor, and

ii)a solid acid–reactive material;
b)injecting said oilfield treatment fluid into a wellbore penetrating said formation, causing said fluid to contact said formation surface;
c)forming a filter cake on said formation surface; and
d)allowing at least a portion of said solid acid–precursor to hydrolyze, whereby at least a portion of said solid acid–reactive material dissolves.

[c13] The method of claim 12 wherein the treatment is selected from drilling, drill–in, completion, hydraulic fracturing, diversion, scale control, water control, matrix dissolution, sand consolidation, frac–packing, and gravel packing.

[c14] A method for forming and at least partially destroying a filter cake comprising the steps of formulating a fluid comprising a composition comprising a solid acid–precursor and a solid acid–reactive material, causing said fluid to contact a surface, and allowing said solid acid–precursor to hydrolyze, whereby at least a portion of said acid–reactive material dissolves.